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EXAMINER	
SINKANTARAKORN, PAWARIS	

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2616	

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/672,657	BOER ET AL.	
	Examiner	Art Unit	
	Pao Sinkantarakorn	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1, 11, and 18 have been considered but are moot in view of the new ground(s) of rejection.
2. Claims 1-21 are currently pending in the application.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 6, 8-10, 11, 15, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al. (newly cited US 5,721,733).

**Regarding claim 1**, Wang et al. disclose a first wireless communication device, comprising:

a controller capable of receiving an acknowledgement (ACK) message transmitted by a second wireless communication device in response to a message transmitted by the first wireless communication device (see column 5 lines 25-43), and a collision detector that monitors a wireless medium for collisions of the acknowledgement message (see column 5 line 66 – column 6 line 8);

**regarding claim 5**, the collision detector is activated after the medium access wireless communication device transmits data (see column 5 line 66 – column 6 line 8);

**regarding claim 6**, the collision detector does not detect a collision if an ACK message or data header is received (see column 5 line 66 – column 6 line 8);

**regarding claim 8**, the controller determines if the second wireless communication device correctly received the transmitted message by monitoring the wireless medium (see column 5 line 66 – column 6 line 8);

**regarding claim 9**, the controller determines that the second wireless communication device did not likely receive the message if a collision is detected (see column 5 line 66 – column 6 line 8);

**regarding claim 10**, the controller determines that the collision was a cause of not receiving the ACK message (see column 5 line 66 – column 6 line 8).

**Claims 11, 15, 16**, are then rejected for the same reason as claims 1, 5, and 6 because claims 11, 15, and 16 are method claims for performing the apparatus of claims 1, 5, and 6.

### ***Claim Rejections - 35 USC § 103***

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 2, 7, 12, 17, 18, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. in view of Currivan et al. (US 2003/0026283).

**Regarding claim 2**, Wang et al. disclose all the subject matter of the claimed invention except the first communication device, wherein the collision detector evaluates an energy level and detects a collision based on the energy level. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose a collision detection module, wherein the module evaluates power indication signal (see paragraph 72), and detects a collision based on the evaluated power indication signal (see paragraph 75 and Table 1).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a collision detection module, wherein the module evaluates power indication signal and detects a collision based on the evaluated power indication signal as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing a collision detection module, wherein the module evaluates power indication signal and detects a collision based on the evaluated power indication signal is that it provides a more efficient transmission apparatus.

**Regarding claim 7**, Wang et al. disclose all the subject matter of the claimed invention except the first communication device, wherein the device is implemented in accordance with the IEEE 802.11 Standard. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose an 802.11-standard device (see paragraph 130, OFDMA; The modulation scheme used in 802.11 is OFDM).

Thus, it would have been obvious to the person of ordinary skill in the art to utilize an 802.11-standard device as taught by Currivan et al. in the collision detecting apparatus of Wang et al.

The motivation for utilizing an 802.11-standard device in the collision detecting apparatus is that it provides a faster transmission rate and more reliable.

**Regarding claim 18**, Wang et al. disclose all the subject matter of the claimed invention except the method, wherein the collision detector evaluates an energy level and detects a collision based on the energy level. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose a collision detection module, wherein the module evaluates power indication signal (see paragraph 72), and detects a collision based on the evaluated power indication signal (see paragraph 75 and Table 1).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a collision detection module, wherein the module evaluates power indication signal and detects a collision based on the evaluated power indication signal as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing a collision detection module, wherein the module evaluates power indication signal and detects a collision based on the evaluated power indication signal is that it provides a more efficient transmission method.

**Regarding claim 20**, Wang et al. disclose all the subject matter of the claimed invention except the first communication device, wherein the monitoring step further comprises the step of detecting a preamble and the collision detection is further based on a detected preamble. However, the invention of Currivan et al. from the same or similar fields of endeavor disclose a collision detection module, wherein the module detects preamble (see paragraph 71), and detects a collision based on the detected preamble (see paragraph 75 and Table 1).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a collision detection module, wherein the module detects preamble and detects a collision based on the detected preamble indication signal as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing a collision detection module, wherein the module detects preamble and detects a collision based on the detected preamble is that it provides a more efficient transmission apparatus.



**Regarding claim 21**, Wang et al. disclose a method, wherein the monitoring step is performed after the data is transmitted (see column 7 lines 1-3, the mobile user monitors the wireless medium to determine whether an acknowledgement has been transmitted from the hub station after the mobile user transmits a data packet);

**regarding claim 22**, the monitoring step does not detect a collision if an ACK message or data header is received (see column 6 lines 33-35).

**Claims 12, 17, and 23** are then rejected for the same reason as claims 2 and 7 because claims 12, 17, and 23 are method claims for performing the apparatus of claims 2 and 7.

6. Claims 3, 4, 13, 14, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. in view of Currivan et al. as applied to claims 1, 2, 11, 12, and 18 above, and further in view of Fukuhara (US 6,643,296).

**Regarding claim 3**, Wang et al. in view of Currivan et al. disclose all the subject matter of the claimed invention except the communication device, wherein the collision detector includes a payload detector and detects a collision based on a detected payload. However, the invention of Fukuhara from the same or similar fields of endeavor discloses a collision detection means for detecting the occurrence of collision based on the payload of a data frame (see column 4 lines 52-63).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a collision detection means for detecting the occurrence of collision based on



the payload of a data frame as taught by Fukuhara into the collision detecting apparatus of Wang et al. in view of Currivan et al.

The motivation for implementing a collision detection means for detecting the occurrence of collision based on the payload of a data frame is that it provides a more efficient transmission apparatus.

**Regarding claim 4**, Wang et al. disclose all the subject matter of the claimed invention except the communication device, wherein the collision detector includes a preamble detector and detects a collision based on a detected preamble. The invention of Currivan et al. from the same or similar fields of endeavor disclose a collision detection module, wherein the module detects preamble (see paragraph 71), and detects a collision based on the detected preamble (see paragraph 75 and Table 1).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a collision detection module, wherein the module detects preamble and detects a collision based on the detected preamble indication signal as taught by Currivan et al. into the collision detecting apparatus of Wang et al.

The motivation for implementing a collision detection module, wherein the module detects preamble and detects a collision based on the detected preamble is that it provides a more efficient transmission apparatus.

**Claims 13, 14, and 19** are then rejected for the same reason as claims 3 and 4 because claims 13, 14, and 19 are method claims for performing the apparatus of claims 3 and 4.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


8. Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pao Sinkantarakorn whose telephone number is 571-270-1424. The examiner can normally be reached on Monday-Thursday 9:00am-3:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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